

**For Immediate Release**

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## NEWS RELEASE

### State-of-the-Art Approach Helps EPA Identify Chemical Risks

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(Washington, D.C., -- April 11, 2007) The National Center for Computational Toxicology (NCCT) of the Office of Research and Development of the U.S. Environmental Protection Agency (EPA) announces the awarding of eight contracts for the generation of high-throughput screening (HTS) bioassay data to support the ToxCast™ program, an innovative approach for prioritization of chemicals for toxicological testing. Results from these contracts will provide, for the first time, a comprehensive and detailed overview of the potential impact of environmental chemicals upon key cellular activities. The contracts range from characterizing the interactions of chemicals with proteins that regulate and maintain proper cell function, to measuring the response of whole cells, to studying chemical effects in a model organism, for up to 10,000 environmental chemicals.

"The ToxCast™ Program will break new ground with this approach, and this cutting-edge research will help EPA make the most informed decisions to protect human health and the environment. Using available technology in an innovative and across-the-board manner will not only save time and money, but provide better information to our decision makers about the hazards of chemicals" said Dr. George Gray, assistant administrator for the Office of Research and Development.

The ToxCast Program is a new tool that can provide data to help the Agency's regulatory programs prioritize chemicals for more rigorous testing. Using state-of-the-art approaches developed in the pharmaceutical industry, EPA will soon have another pioneering, cost-efficient way to prioritize environmental chemicals for more thorough examination of their potential to harm people or the environment. These tests provide information on the potential impact of chemicals on biological pathways critical for the function of systems such as the heart, lungs, brain or reproductive organs quickly and in a more cost-efficient manner. Armed with this science-based information, EPA can prioritize chemicals for more detailed and expensive toxicological evaluations, including using the animal tests more efficiently.

This five-year effort will be divided into three phases. In the initial phase, as a proof-of-concept, ToxCast™ will examine more than 300 chemicals, in hundreds of different HTS bioassays, to create predictive signatures based on the known toxicity of the 300 chemicals. Phase II will focus on the expansion and validation of ToxCast™ predictive signatures, generating data on over 1000 additional chemicals. In Phase III, ToxCast™ will be expanded to the

## Page 2, State-of-the-Art Approach Helps EPA

thousands of environmental chemicals requiring prioritization, delivering an affordable, science-based system for categorizing chemicals. As the ToxCast™ database grows so will confidence in predicted toxicity and potential mechanisms of action useful in refining and reducing the use of animals in toxicity testing. Phase I results are anticipated by the summer of 2008, and to ensure transparency and collaboration, ToxCast™ data will be freely available at PubChem, a National Library of Medicine public database that stores information about the biological activities of small molecules. The approach and the chosen assays will also be discussed at the upcoming International Science Forum on Computational Toxicology to be held at the EPA campus in North Carolina on May 21-23, 2007.

### ToxCast™ HTS contract awardees:

ACEA Biosciences, Inc. (San Diego, Calif.)  
Attagene, Inc. (Morrisville, N.C.)  
BioSeek Inc. (Burlingame, Calif.)  
Cellumen, Inc. (Pittsburgh, Pa.)  
Expression Analysis, Inc. (Durham, N.C.)  
In Vitro ADMET Laboratories (IVAL), LLC. (Rockville, Md.)  
NovaScreen Biosciences Corp. (Hanover, Md.)  
Phylonix Pharmaceuticals, Inc. (Cambridge, Mass.)

### For more information:

- ToxCast™ Program <http://www.epa.gov/ncct/toxcast/>
- List of the ToxCast™ awards and more information about each project:
  - [http://www.epa.gov/oamhpod1/adm\\_placement/prhq0614395/index.htm](http://www.epa.gov/oamhpod1/adm_placement/prhq0614395/index.htm)
  - [http://www.epa.gov/oamhpod1/admin\\_placement/0615840/index.htm](http://www.epa.gov/oamhpod1/admin_placement/0615840/index.htm)
- National Center for Computational Toxicology <http://www.epa.gov/ncct/>
- Chemical Prioritization Community of Practice  
[www.epa.gov/ncct/practice\\_community/category\\_priority.html](http://www.epa.gov/ncct/practice_community/category_priority.html)
- National Library of Medicine public database, PubChem:  
<http://pubchem.ncbi.nlm.nih.gov/>
- International Science Forum on Computational Toxicology  
<http://www.epa.gov/ncct/forum/>
- EPA's Office of Research and Development [www.epa.gov/ord](http://www.epa.gov/ord)

EPA relies on quality science as the basis for sound policy and decision-making. EPA's laboratories and research centers, and EPA's research grantees, are building the scientific foundation needed to support the Agency's mission to safeguard human health and the environment.